

Inglewood Basketball and Entertainment Center (IBEC) Project AB 987 Application

Clearinghouse No. 2018021056

The following summary provides information about certain aspects of the proposed Inglewood Basketball and Entertainment Center project (the “IBEC Project”) as described and analyzed in the IBEC Project AB 987 application, submitted in January 2019 with supplemental materials submitted in support of the application in June 2019.

1. Market-Shifted and Net New Events

As stated in the IBEC Project AB 987 application, the anticipated events to be hosted at the IBEC Project include an annual average of 49 LA Clippers NBA basketball games with a maximum attendance of 18,000 attendees as well as third-party events including 78 entertainment or non-NBA sporting events with maximum attendance ranging from 7,500 to 18,500 attendees, 100 corporate or community events with up to 2,000 attendees, and 16 plaza events of up to 4,000 attendees.

The GHG analysis for the IBEC Project AB 987 application accounts for the unique circumstances of the IBEC Project as a new indoor arena venue to the Los Angeles regional market with three other existing indoor arena venues (the Staples Center, the Honda Center, and the Forum), and the fact that the total number of anticipated events to be hosted at the IBEC Project includes both events that would otherwise occur in the Los Angeles market at those existing venues absent construction of the IBEC Project (“market-shifted events”) and events that would not otherwise occur if the IBEC Project is not constructed (“net new events”). The estimate of net new GHG emissions associated with events at the IBEC Project includes a calculation of all net new GHG emissions associated with net new events and a conservative estimate of the additional or net new GHG emissions associated with an event market-shifted to the IBEC Project.

The analysis of net new GHG emissions provided in the IBEC Project AB 987 application appropriately assumes that all NBA basketball LA Clippers games would be market-shifted events, with the exception of a potential for two additional LA Clippers preseason games that could occur at IBEC that do not currently occur at the Staples Center. As the games for professional sports teams are hosted at a “home” arena, the annual number of LA Clippers games and the shifting of those events from one arena to another can be reasonably determined for purposes of the IBEC Project GHG Analysis.

Unlike NBA games, the non-NBA, third-party events anticipated to be hosted at the IBEC arena do not have a “home” arena and it is not possible to predict which particular venue will host a particular event with any degree of accuracy. Large indoor arena venues only host certain types of events, based on size and anticipated profitability, and venues compete with other venues within market to host those events. The annual number of third-party events at any given venue is driven by a number of different factors, including the number and popularity of musical acts or other entertainment providers on tour each year, relationships and agreements between venues and concert promoters, number of tickets that could be sold, the time of year, availability of the venue, etc.

Therefore, in order to determine the number of net new third-party events to be hosted at the IBEC Project, it is reasonable to evaluate the effect of the IBEC Project on the Los Angeles third-party event market as a whole. As described in the GHG Analysis Supplemental Technical Memorandum included in the IBEC Project AB 987 application, industry experts Conventions, Sports & Leisure International (“CSL”) prepared an analysis of the effect of the construction of the IBEC Project on the Los Angeles market. CSL collected data on the Los Angeles regional event market (at the existing Staples Center, Forum, and Honda Center), and then made reasonable assumptions about future growth. Growth in the number of events has been occurring due to a number of factors, including population growth and the increased need of musical acts to rely on live performances rather than album sales for revenue.

Based on overall trends in the number of events in the Los Angeles region, CSL was able to reasonably estimate how many of the total events in the market would be attributable to the opening of the IBEC arena as a fourth venue, versus the number of events that would be expected to occur absent the Project. The CSL analysis of market-shifted versus net new events at the IBEC arena considers the Los Angeles regional market as a whole, based upon the current number of third-party events and anticipated growth in the market that would occur absent the IBEC Project. CSL then projected the amount of additional new growth in the number of events in the Los Angeles market that would be expected due to the IBEC Project's introduction of a fourth event venue with up to 78 major third-party events to the market. These “net new” third-party events are what would not otherwise occur in the Los Angeles market if the IBEC were not built. The GHG analysis included in the IBEC Project AB 987 application is based on two key projections prepared by CSL:

- Major third-party events anticipated to occur in the Los Angeles market (Staples Center, Forum, and Honda Center) in 2025 without IBEC: 287 events
- Major third-party events projected to occur in the Los Angeles market (Staples Center, Forum, Honda Center, and IBEC) in 2025 with IBEC: 319 events

The Los Angeles Incremental Events Analysis prepared by CSL is included as an attachment to the GHG Analysis Supplemental Technical Memorandum submitted in June 2019 provides a detailed explanation of the methodology used to prepare those projections. As demonstrated in the CSL analysis, these projections show that the IBEC Project is reasonably anticipated to result in an additional 32 major third-party events in the Los Angeles market. In other words, although the IBEC Project is anticipated to host 78 major third-party events, the project will not result in 78 new events and the associated net new GHG emissions in the Los Angeles region. Rather, 32 of those events (approximately 41%) would be net new, and 46 events (approximately 59%) would be market-shifted from other venues.

Because CSL's determination of the number of market-shifted versus net new events is based upon the total aggregate number of events in the market, rather than the number of events at each particular venue, and future growth in the number of events is built into the analysis, any backfill of existing venues is included as part of, and would be a result of, that overall market growth. Attributing backfill to any particular venue is neither necessary nor possible under this methodology.

Unlike NBA, NHL, and WNBA games, it is not possible to predict which venues would host a particular third-party event, or if a particular event would shift from one arena to another. Rather, the pool of third-party events in the Los Angeles market would be affected in three ways: (1) the number of third-party events projected to occur in the market with three indoor arena venues would be redistributed amongst four arenas; (2) overall, historical growth in the concert industry suggests the number of third-party events occurring in the Los Angeles regional market would increase over time regardless of the addition of a fourth venue to the market; and (3) the number of events of third-party events projected to occur in the market would increase as a result of the addition of a fourth venue.

The concept of one venue being “backfilled” is not applicable to the analysis:

- For example, if Concert A could have been hosted at the Staples Center but instead occurs at the IBEC Arena, and Concert B occurs at Staples Center on the same event day, Staples Center would not be “backfilled” with Concert B; rather, both Concert A and Concert B would be considered part of the total number of third-party events in the marketplace.
- Even if Concert A and Concert B were to occur on the same day, it not possible to determine which is “net new” to the market on an individual event level. Therefore, the methodology used in the AB 987 application based on the CSL analysis – effect on the market as a whole – is appropriate.

In order to address public comments, and because sufficiently detailed information was known about the nature of the events that would be moving to the IBEC Arena and the schedule for those events, CSL

prepared a separate analysis of backfill of the vacated LA Clippers game event times at the Staples Center. The inclusion of 7 backfill events at Staples Center for vacated LA Clippers event days is in addition to the market growth projections, which as explained above covers all non-NBA events in the Los Angeles region. Therefore, analyzing 7 backfill events replacing vacated LA Clippers games at the Staples Center further adds to the conservative estimate of net new GHGs in the AB 987 application.

With respect to corporate and community events, CSL concluded that these events were likely to be market-shifted, stating on page 7 of the May 16, 2019, Los Angeles Incremental Event Analysis report that "IBEC is not anticipated to significantly contribute to growth in the number of corporate or community events, rather, it is expected that IBEC will host events that would otherwise occur at other locations in the Los Angeles area such as hotel banquet rooms, auditoriums or theaters, or other similar venues." Nevertheless, as shown in the table on page 5 of Attachment 3: GHG Analysis Supplemental Technical Memorandum dated June 4, 2019, included in the June 12, 2019, supplemental submittal to CARB and OPR, the GHG analysis conservatively assumed that 20% of corporate and community events would be net new. As third-party events, plaza events were analyzed using the same the overall market shift versus net new percentage for third-party events.

Based on the reasonable and conservative estimate described above, the GHG analysis included in the GHG Analysis Supplemental Technical Memorandum is based on the following regarding market-shifted and net new events:

Event Type	Market-Shifted	Net New	Total
LA Clippers NBA Basketball Games	47 games	2 games	49 games
Major Third Party Events	46 events	32 events	78 events
Corporate/Community Events	80 events	20 events	100 events
Plaza Events	10 events	6 events	16 events
Potential Staples Center Backfill Events	7 events (additional)		

Additionally, all estimates of net new GHG emissions associated with events at the IBEC Project provided in the GHG Analysis Supplemental Technical Memorandum are based on the maximum anticipated attendance for all LA Clippers games and third-party events (both market-shifted and net new), providing a conservative estimate of GHG emissions associated with the IBEC Project.

2. IBEC Project Information

The figures listed below are provided for informational purposes and additional context for the IBEC TDM Program, and do not alter or affect the analyses of trip reduction or GHG emissions provided in the IBEC AB 987 Application.

- The site plan attached as [Figure 1](#) shows the proposed IBEC Project as analyzed in the IBEC AB 987 Application, though it reflects updates to the shape of the arena structure and the location of structured parking as compared to the graphic submitted in January 2019.
- [Figure 2](#) includes more details about the proposed location of parking structures, bicycle parking and electric vehicle charging stations, and the Transportation Hub that will serve the IBEC Project. The Transportation Hub is designed to accommodate the charter coach buses and microtransit vehicle operations that will be included in the IBEC TDM Program, as well as provide staging and loading areas for TNC vehicles. As shown in this figure, the proposed IBEC Project includes a total of 4,125 parking spaces (including 330 electric vehicle charging stations), just meeting the minimum requirements of the City of Inglewood Municipal Code.

- Figure 3 illustrates the proposed shuttle routes to nearby rail transit stops and the location of the shuttle drop-off and pick-up area for the IBEC Project. These proposed shuttle routes have been designed to provide efficient service to the project site using major arterials with sufficient capacity, and to avoid neighborhood streets. A total of three routes are proposed, each connecting the project site with the closest Metro rail stations to the north, south, and west.
- Figure 4 shows the location of existing bus stops near the IBEC Project site. As shown in the diagram, the two stops nearest the Project Site would be relocated during construction to ensure continued service during construction and to better facilitate operations of the bus routes serving those stops.

3. IBEC TDM Program and Public Transit

The IBEC TDM Program incorporated into the IBEC Project AB 987 Application includes shuttle service for certain events hosted at the arena provided to nearby three rail transit stations to serve existing or under-construction public transit rail lines: the Hawthorne/Lennox Station, the La Brea (Downtown Inglewood) Station, and the AMC/96th Street Station. As detailed in the Replies to Correspondence submitted in June 2019 (see pp. 20-21), a detailed, multi-modal travel time analysis was completed to develop the operating assumptions for the shuttle service described in the IBEC Project AB 987 Application.

As stated in TDM 2 on page 2 of Attachment C to the January 2019 application, shuttle service was assumed to require operation of 27 vehicles with a capacity of 45 persons per vehicle. The shuttle operating speed was calculated at 14 mph, which is a reasonable speed estimate when compared to local bus services in the area during peak hours. Assuming that average speed, one-way travel times for the shuttle routes were calculated at 7 minutes for the Hawthorne/Lennox Station route, 12 minutes for the La Brea Station route, and 10 minutes for the AMC/96th Street Station route.¹ Including two minutes of dwell time (i.e., time stopped for boarding/de-boarding passengers) and schedule recovery² at each end, the 27 vehicles could provide a total of 38 scheduled round trips within a 30-minute period. Headways would vary by route, but would be on the order of approximately 2–4 minutes during peak demand periods. This level of frequency would ensure the shuttles would be an attractive first-mile/last-mile connection in lieu of other alternatives such as transportation network companies (TNCs).

As analyzed in the IBEC Project AB 987 application, projected annual ridership for the shuttle program would be approximately 204,500 boardings when accounting for all event types and size, assuming maximum attendance for each event. The proposed shuttle operations plan was designed to serve a maximum-attendance event (18,500 attendees) with a 12% rail mode share (i.e., approximately 2,200 attendees during each of the pre- and post-event periods), assuming that the majority of these attendees leave the venue within 30 minutes after conclusion of the event. Based on the lower 7% rail mode share assumed in the June 2019 supplemental submittal (as shown on Attachment 2: Trip Generation Supplemental Technical Memorandum, page 8, Table 5), the shuttle ridership demand for a maximum-attendance event would be approximately 1,300 attendees during each of the pre- and post-event periods. Therefore, the shuttle operations plan has some inherent flexibility to respond to variations in ridership demand and average vehicle speed due to traffic conditions.

¹ Even assuming a much more conservative average shuttle speed of approximately 8 mph (a typical speed of urban buses in congested mixed-flow traffic), one-way travel times on the shuttle routes would be approximately 12 minutes for the Hawthorne/Lennox Station route, 21 minutes for the La Brea Station route, and 17 minutes for the AMC/96th Street Station route.

² Schedule recovery, or “padding”, refers to additional slack built into the timetable for a transit service, designed to allow transit vehicles subject to unforeseen delay to recover time and return to on-time operations.

The shuttle service included in the IBEC Project TDM Program is designed to be flexible and responsive to traffic conditions to maximize efficient operation of the shuttles during events. The City of Inglewood will require the development of a Transportation Management Plan (TMP) for the IBEC Project as a condition of approval. The TMP will include traffic control measures to reduce congestion and improve traffic flow during events, which will also ensure that shuttles can efficiently arrive at and depart from the site. In particular, these measures could include traffic control officers present at various locations near the IBEC to hold conflicting traffic movements and give priority to shuttles. Additional traffic control measures, such as turn restrictions, coning, and temporary transit-only lanes could be implemented to further reduce potential conflicts between shuttle operations and background event traffic.

Recent surveys of LA Clipper game attendees at the Staples Center indicate that approximately 7% to 9% of attendees arrive by public transit. According to information provided to the public by the operator of the Staples Center, the Staples Center provides 3,300 parking spaces in three parking structures (with a total of only 16 EV charging stations) and relies on more than 10,000 parking spaces within a 7 to 10 minute walk of the Staples Center to accommodate event attendees.³ Although the Staples Center is located relatively close to existing rail transit stops, current operations do not include a TDM program or other comprehensive program to encourage public transportation use by employees or event attendees. As described on page 14 of the June 2019 Replies to Correspondence, an analysis of ticketholder data also shows that a substantial number of ticketholders are within a two-transfer ride to/from the IBEC site, suggesting that a 7% transit mode share is reasonably achievable for the IBEC Project.

4. IBEC TDM Program and Trip Reduction

The Trip Generation Supplemental Technical Memorandum submitted as Attachment 2 in the June 2019 supplemental submittal to the IBEC Project AB 987 application includes updates and corrections to the projected trip generation associated with the IBEC Project and a demonstration of the effectiveness of the IBEC TDM Program to achieve a 15% reduction in vehicle trips. As shown in Table 8 on page 11 of the Trip Generation Supplemental Technical Memorandum, the IBEC TDM Program is estimated to achieve a 15.696% reduction in annual vehicle trips as compared to the IBEC Project absent implementation of a transportation demand management program.

Generally, the analysis provided in the Trip Generation Supplemental Technical Memorandum provides a more conservative approach regarding trip generation rates and travel behavior. For example, these adjustments include lower average vehicle occupancy (AVO) rates for event attendees and employees, a reduction in projected transit ridership from 10% to 7% with implementation of the TDM Program in the IBEC Project With TDM Program Scenario analysis, and an increase to the overall drive percentage from 66% to 74% for event attendees under the IBEC Project With TDM Program Scenario analysis. Detailed descriptions of these updates are provided on pages 3-8 of the Trip Generation Supplemental Technical Memorandum.

As a result of these conservative adjustments, the overall annual trips generation estimate for the proposed IBEC Project absent implementation of the IBEC TDM Program increased by approximately 9.6% as compared to the IBEC Trip Generation Memorandum submitted in January 2019. Detailed calculations of the total annual trip generation estimates with and without implementation of the IBEC TDM Program are provided in the Trip Generation Supplemental Technical Memorandum in Table 7 on pages 9 and 10. The majority of the increase in total annual trips in the June 2019 supplemental submittal is attributable to increases in vehicle trips by event attendees and IBEC Project employees (including LA Clippers organization employees) rather than ancillary retail, dining, and hotel use visitors or customers. Most of the transportation demand management measures included in the IBEC TDM Program are designed to reduce event attendee and employee vehicle trips. Therefore, the effectiveness of the IBEC TDM Program as calculated in the Trip Generation Supplemental Technical Memorandum shows a slight increase in trip

³ <https://www.staplescenter.com/plan-your-visit/getting-here> (accessed August 16, 2019).

reduction effectiveness as compared to the IBEC Project Trip Generation Memorandum submitted in January 2019.

The IBEC TDM Program is a critical component of the program of local direct measures included in the IBEC Project to reduce total annual GHG emissions. As shown in Table 7 on page 10 of the Supplemental Trip Generation Memorandum, the IBEC Project with implementation of the IBEC TDM Program is conservatively estimated to result in a total of 3,238,459 annual trips for all vehicle types, based on the maximum anticipated attendance for events to be hosted at the IBEC Project and implementation of the IBEC TDM Program. The GHG emissions estimates provided in the GHG Analysis Supplemental Technical Memorandum are based on the same number of annual project trips assuming the maximum anticipated attendance for all events (see exhibits included in Appendix A of Attachment 3 as *Mobile Source Emissions IBEC Maximum Event Attendees - Light Duty Vehicles (Auto and TNC Trips)* and *Mobile Source Emissions IBEC Maximum Event Attendees - Other Vehicles (Shuttles, Vanpools, Charter Coaches, Minibuses)*). As discussed in the on page 18 of the IBEC Project GHG Analysis, total annual mobile GHG emissions will change over time as a result of implementation of Pavely I and II, the Advanced Clean Cars Program, and fleet turnover, and therefore the amount of annual GHG reduction achieved by implementation of the IBEC TDM Program similarly will change over time.

As for most TDM programs, many of the individual measures included in the IBEC TDM Program are complementary to each other, such that the effectiveness of each measure, when considered in conjunction with the other components of the program, may be greater than the effectiveness of that measure when considered in isolation. For instance, the strategies described in TDM 7 (Information Services) will serve to increase awareness and participation in many of the other TDM measures such as TDM 1 (Encourage Alternative Modes of Transportation) or TDM 4 (Encourage Active Transportation, and the strategy included in TDM 3 (Encourage Carpools and Zero-Emission Vehicles) to provide variable parking pricing based on vehicle occupancy may increase the effectiveness of alternative transportation TDM measures as well as increase carpooling. In addition, TDM 1 (Encourage Alternative Modes of Transportation) is directly related to TDM 2 (Event-day Dedicated Shuttle Services) since TDM 1 encourages transit and TDM 2 provides shuttles between transit stops and the IBEC Project site.

The IBEC TDM Program is designed to be a dynamic, flexible program of measures and strategies that will evolve and adapt over the course of the operational life of the IBEC Project to reduce single-occupancy vehicle trips associated with the proposed IBEC Project. The IBEC TDM Program described in the AB 987 application identifies feasible measures to reduce trips, and will incorporate other emerging strategies and technologies as conditions change over time. In compliance with Public Resources Code Section 21168.6.8 subsections (a)(6) and (b)(5), which require annual reporting on implementation, the IBEC TDM Program includes annual reporting and monitoring components, which are key features of the program itself that will inform evidence- and experience-based operation of and adjustment to the IBEC TDM Program to optimize the effectiveness of each measure and strategy, add new measures or technologies that may emerge, and maximize feasible trip reduction.

The nature of the IBEC TDM Program makes it difficult to accurately assign specific trip reduction percentages and, consequently, GHG emission reduction percentages, to individual measures. There are complex interactions between TDM measures. A comprehensive set of transit TDM measures, for example, would have different vehicle miles traveled (VMT) benefits depending on which combination of strategies is used and how many are used, as discussed in California Air Pollution Control Officers Association (CAPCOA) guidance.⁴ The interrelationship between land use/transportation variables

⁴ California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* (2010), p. 62 available at <http://www.aqmd.gov/docs/default-source/ceqa/handbook/capcoa-quantifying-greenhouse-gas-mitigation-measures.pdf>

intended to predict VMT is generally a challenge, as noted in ARB's VMT Tool User Manual.⁵ This phenomenon is also discussed in Federal Highway Administration guidance.⁶ The TDM measures included in the IBEC TDM Program are designed to work in tandem and specifically for this type of use, and it is not feasible to precisely isolate the benefit of any individual measure to reduce GHG emissions.

The IBEC TDM Program is designed to reduce annual vehicle trips through two primary mechanisms: measures and strategies to increase alternative transportation mode share, and measures and strategies to increase the number of persons per vehicle or AVO. For example, TDM 6 (Park-n-Ride Program) is designed to reduce vehicle travel, whereas TDM 3 (Encourage Carpools and Zero-Emission Vehicles) is designed to increase AVO; some measures, such as TDM 7 (Information Services), are designed to achieve both goals. Overall, the measures of the IBEC TDM Program targeted to increasing alternative modes of transit are projected to result in a trip reduction effectiveness of approximately 6.3% (approximately 40% of overall IBEC TDM Program total annual trip reduction) and the AVO-targeted measures are estimated to achieve an approximately 9.4% trip reduction effectiveness (approximately 60% of the overall IBEC TDM Program total annual trip reduction).

⁵ California Air Resources Board, Final Report, Quantifying the effect of local government actions on VMT (2014), p. 42, available at <https://ww3.arb.ca.gov/research/apr/past/09-343.pdf>.

⁶ Federal Highway Administration, Office of Operations, *Known Effectiveness of TDM Strategies*, available at <https://ops.fhwa.dot.gov/publications/fhwahop12035/chap10.htm>.

Figure 1
INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER PROJECT SITE PLAN

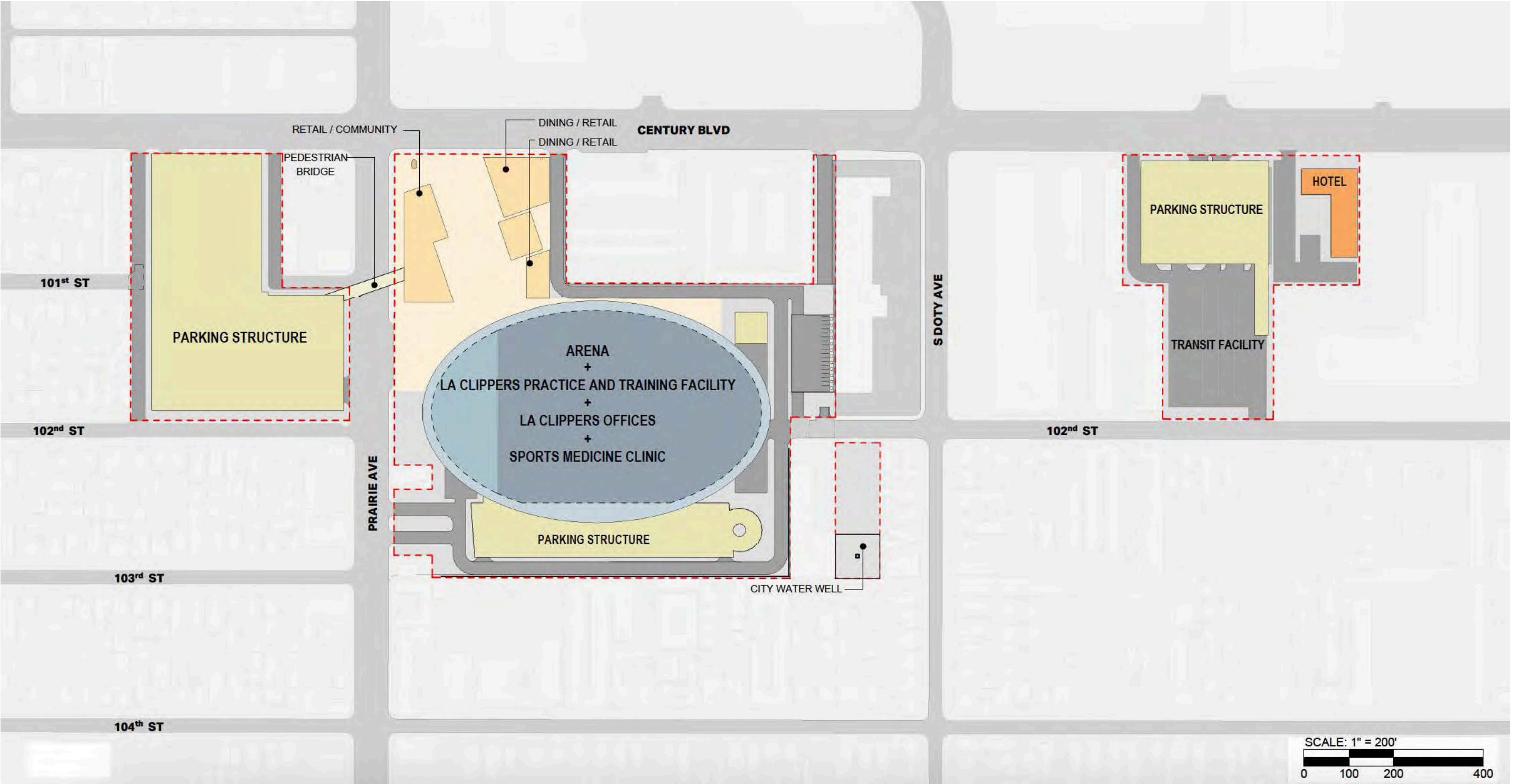


Figure 2
PARKING AND TRANSIT FACILITIES

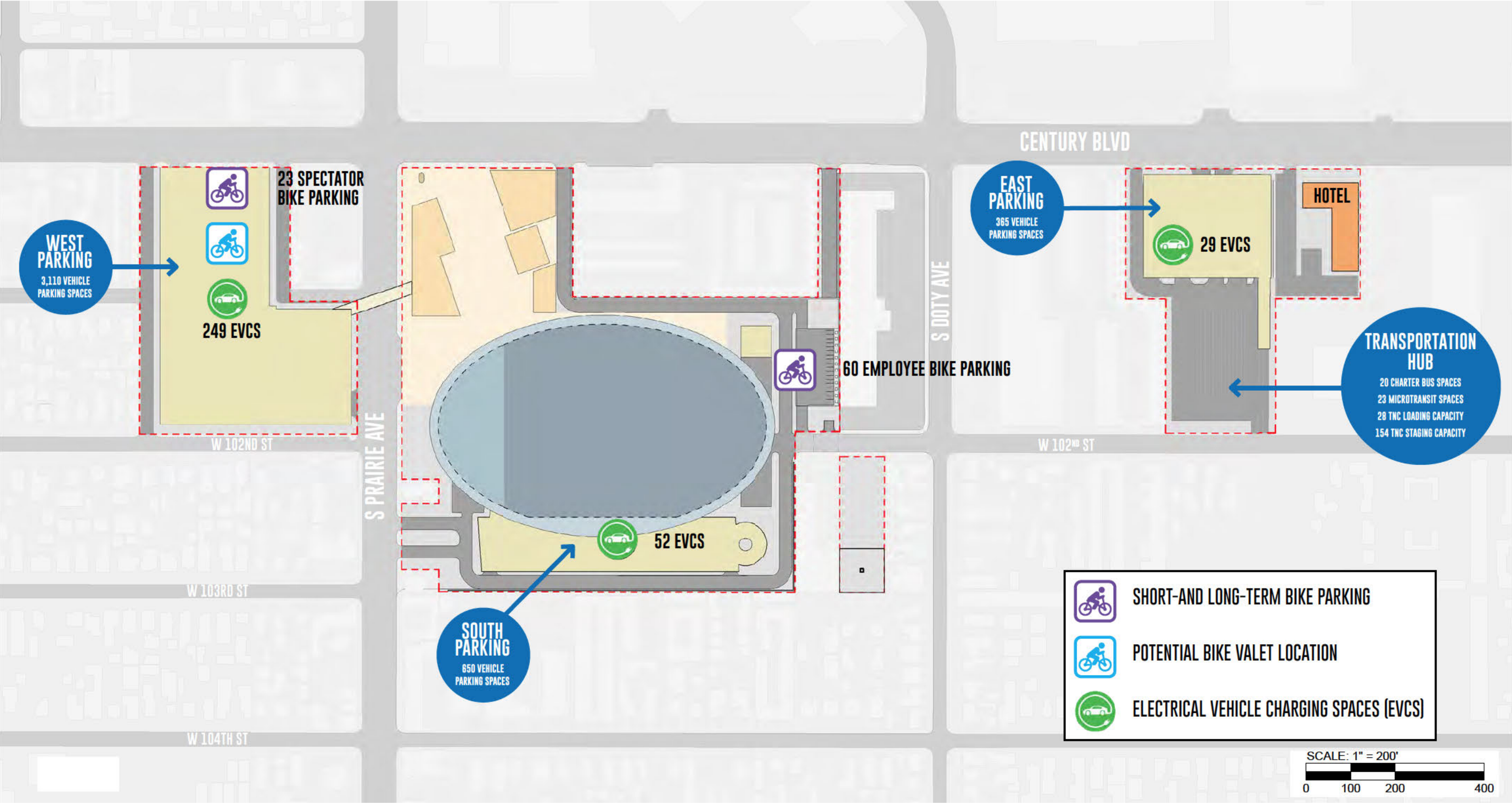
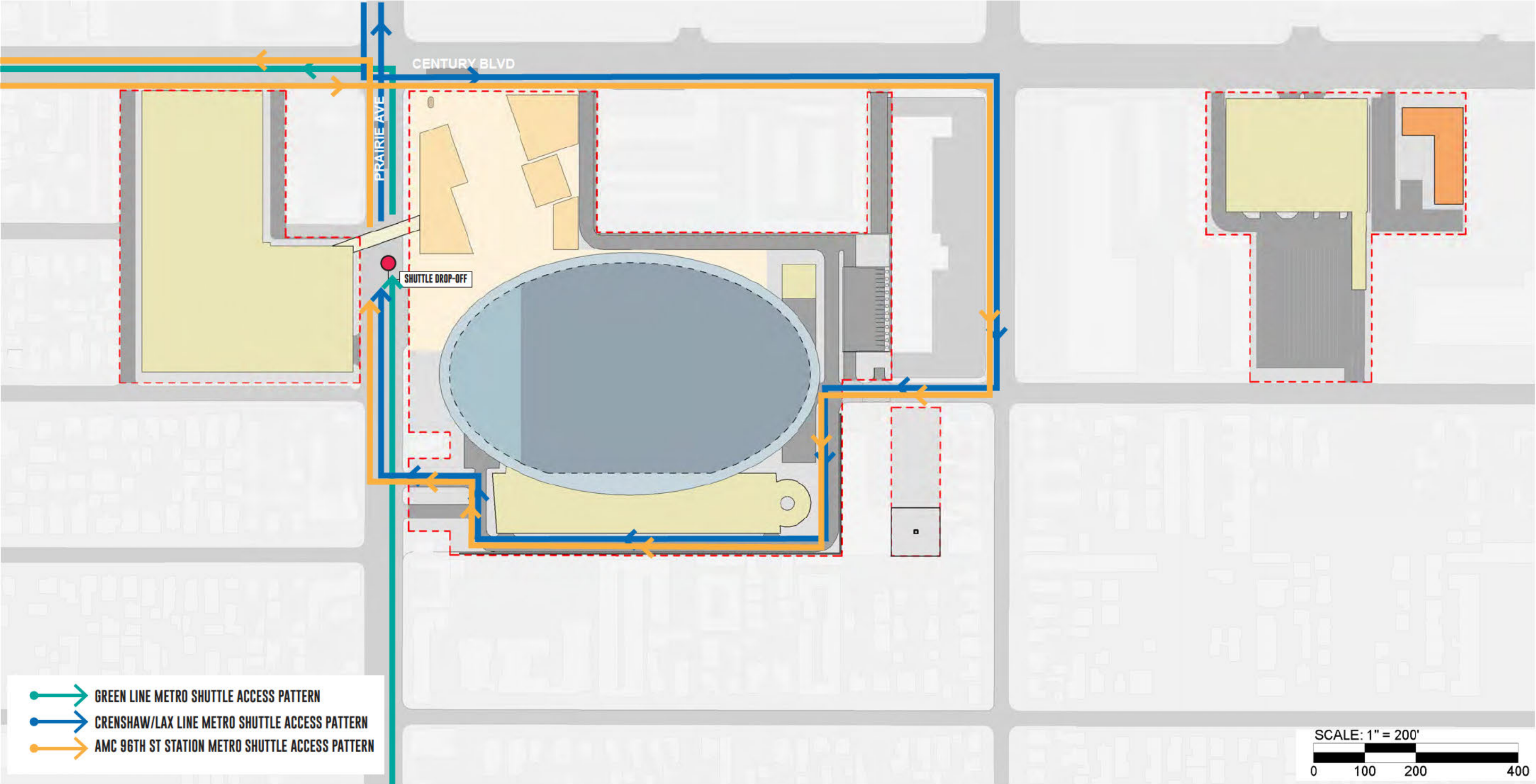


Figure 3
SHUTTLE ACCESS PLAN



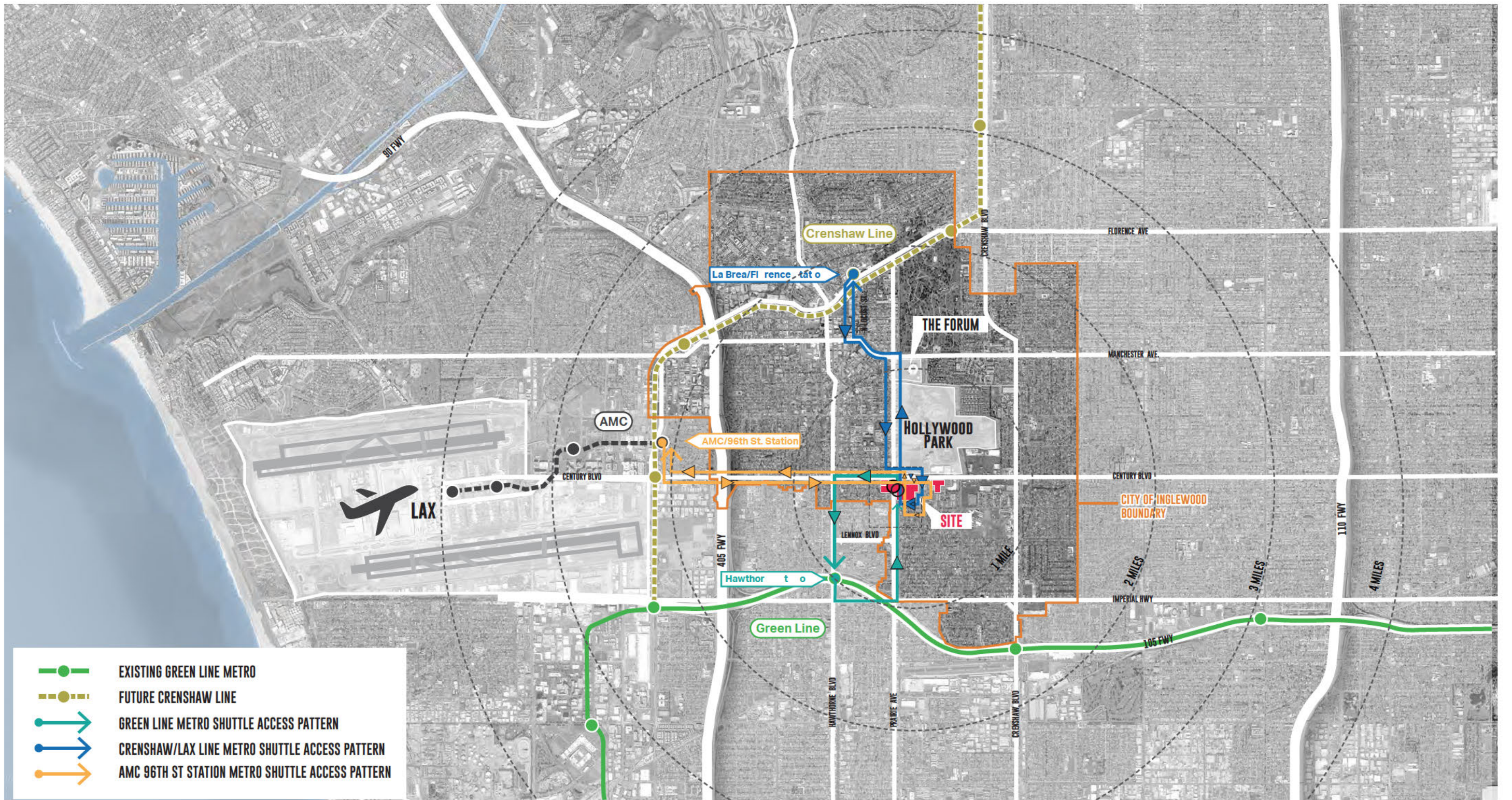


Figure 4
EXISTING AND RELOCATED BUS STOPS

